

National Bison Range

National Wildlife Refuge

*Environmental Assessment
for the Hardin Ranch
Proposed Addition*



Environmental Assessment

National Bison Range

Hardin Ranch

Proposed Addition

Prepared by:

U.S. Fish and Wildlife Service
National Bison Range
132 Bison Range Road
Moiese, Montana 59824

and

U.S. Fish and Wildlife Service
Refuges and Wildlife, Division of Planning
134 Union Blvd., Suite 300
Lakewood, Colorado 80228

November 2001

Table of Contents

Chapter 1. Purpose of and Need for Action

Introduction and Background	5
Proposed Action	6
Purpose of and Need for Proposed Action	6
Project Study Area	6
Decisions to be Made	6
Issues Identified and Selected for Analysis	11
Biological Issues	11
Social and Economic Issues	11
Related Actions	12
National Wildlife Refuge System and Authorities	13
The Habitat Protection and Land Acquisition Process	14
Refuge Revenue Sharing Act	14

Chapter 2. Alternatives, Including the Preferred Alternative

Alternative A. No Action	15
Alternative B. Acquisition of the Hardin Property as an Addition to the National Bison Range	15
Alternatives Considered but not Studied	15

Chapter 3. Affected Environment

Biological Environment	16
Social and Economic Considerations	17
Cultural Resources	18
Contaminants and Hazardous Wastes	18

Chapter 4. Environmental Consequences

Effects on the Biological Environment	19
Effects on the Social and Economic Conditions	21
Unavoidable Adverse Impacts	22
Irreversible and Irretrievable Commitment of Resources	23
Short-term Uses Versus Long-term Productivity	23
Cumulative Impacts	23

Chapter 5. Consultation and Environmental Review

Agency Coordination	24
National Environmental Protection Act	24
Other Federal Laws, Regulations and Executive Orders	24
Distribution and Availability	25
Authors	25
References	25

Chapter 6. Interim Compatibility Determination

Refuges and Primary-Use Areas	26
The Compatibility Standard	26
Interim Compatibility Determination	26

Appendix A. Endangered, Threatened and Candidate Species

Appendix B. Distribution List for the Environmental Assessment

Figure 1. Vicinity of Proposed Hardin Acquisition	7
Figure 2. Proposed Addition to the National Bison Range, The Hardin Property	9

Chapter 1. Purpose of and Need for Action

Introduction and Background

The National Bison Range (Bison Range) is a National Wildlife Refuge operated by the U.S. Fish and Wildlife Service in northwestern Montana. The mission of the Bison Range is to maintain a representative herd of bison, under reasonably natural conditions, to ensure preservation of the species for continued public enjoyment. The National Bison Range is one of the oldest and most visited Refuges in the country. It has a rich and important history to the country and to the native Tribes of the region.

Since the Bison Range was originally established by Congress in 1908, “. . . for a permanent national bison range for the herd of bison . . .”, both the size and the purpose of the Refuge has expanded. In 1909, new legislation provided for fencing and buildings and expanded the boundary to include 20,000 acres. In 1921, Executive Order 1051 added the purpose “. . . as refuge and breeding grounds for birds.” Finally, legislation on August 12, 1958, authorized the purchase of 400 acres “. . . to provide adequate pasture for the display of bison in their natural habitat at a location readily available to the public . . .” While Congress has authorized the Bison Range to expand to 20,400 acres, the Refuge currently includes only 18,566 acres.

Historically, pressure to develop residential housing near the Bison Range has been low. The Bison Range lies within the exterior boundaries of the Flathead Indian Reservation, and prior to 1910, land surrounding the Bison Range was held in Tribal Trust by the Confederated Salish and Kootenai Tribes or was owned as individual Tribal allotments. Past land-use, such as haying and grazing, combined with sparse home density was not a significant threat to the natural resources or operational integrity of the Bison Range. The most significant threat from neighboring lands had been the movement of weed seed onto the Refuge.

Over the past 90 years, several of the individual member allotments surrounding the Bison Range have been sold to non-Tribal members. In the last 10 years, the pressure to convert these lands into housing developments has increased dramatically. The Charlo/Moiese area of the Reservation had a 22.6 percent increase in population since the last census (U.S. 2000 Census). The changes in land-use from grazing and haying to housing development bring new threats to the Refuge including increased human and pet trespass, increased threat of poaching and degradation of the viewshed from the Bison Range. Subdivision and housing development may create changes that are likely to be irreversible.

Recently, a property adjacent to the western boundary of the Bison Range has become available for sale. The current owner is considering subdividing and selling the property for a housing development. However, the Service also has an opportunity to purchase this property to protect the existing resources on this tract and the adjacent Bison Range.

Proposed Action

The Service proposes to purchase approximately 240 acres, known as the Hardin Property, for the purpose of protecting resources and preventing impacts to the National Bison Range from housing development. The Hardin Property is located approximately 45 miles north of Missoula, Montana and 9 miles south of Charlo, Montana. The property is adjacent to the western boundary of the Bison Range and east of Highway 212. The highway leads to the Bison Range entrance and headquarters two miles to the north (Figure 1).

The Service proposes to purchase this property in fee-title. The property may be passed from the original owners to the Service through a conservation group, as a third party, in order to expedite the sale. The purchase of this property would increase the acreage of the Bison Range from 18,566 acres to 18,806 acres which is within the limit of 20,400 total acres authorized by Congress.

Purpose of and Need for Proposed Action

The purpose of the proposed acquisition is to protect the existing habitat and the adjacent National Bison Range from housing development on the Hardin Property. This action is needed because the Bison Range is threatened with permanent change if the current owner continues with his plans to develop the property for housing. Negative changes to the Bison Range that may occur include predation, trespass, littering, and gravel extraction. This proposal also would benefit the American public by protecting wildlife, rare palouse prairie grassland, and open space.

Project Study Area

The Project Study Area, the Hardin Property, is located on the west side of the Bison Range (Figure 2). The legal description of the property is:

T18N., R 21W., Section 4 E $\frac{1}{2}$ SW $\frac{1}{4}$
Section 9 S $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$

The Hardin Property is 1.25 miles long, north to south, and .25 mile wide over most of that length. The property has a common boundary with the Bison Range for 1.5 miles and adjoins Montana State Highway 212 at two points. The Flathead Irrigation Project "H" canal runs the length of the property and supplies water to irrigated hay land.

Decisions To Be Made

Based on the analysis provided in this Environmental Assessment, the Regional Director of the U.S. Fish and Wildlife Service, Region 6, Mountain-Prairie Region, will make three decisions:

1. Determine whether the Service should purchase the parcel known as the Hardin Property. If yes,
2. Select an alternative for habitat protection; and
3. Determine whether the selected alternative will have a significant impact upon the quality of the human environment. This decision is required by the National Environmental Policy Act (NEPA) of 1969. If the quality of the human environment is not significantly affected, a Finding of No Significant Impact will be signed and will be made available to the public. If the alternative is determined to have a significant impact, then an Environmental Impact Statement will be prepared to further address those impacts.

Figure 1. Vicinity of Proposed Hardin Acquisition

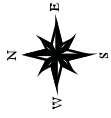
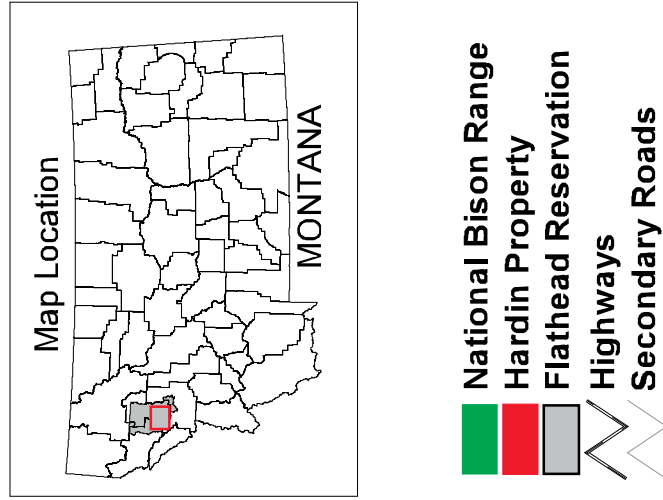
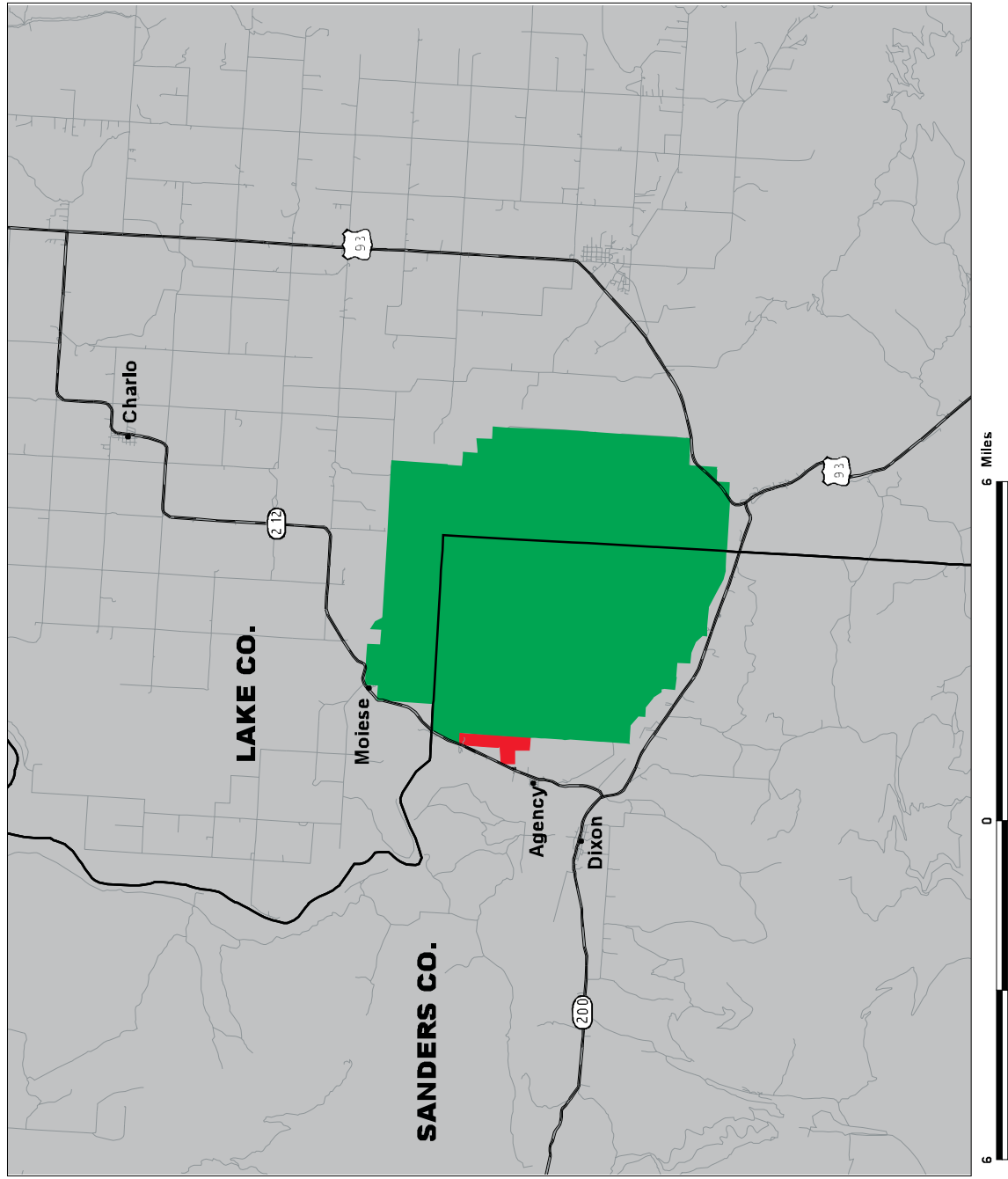
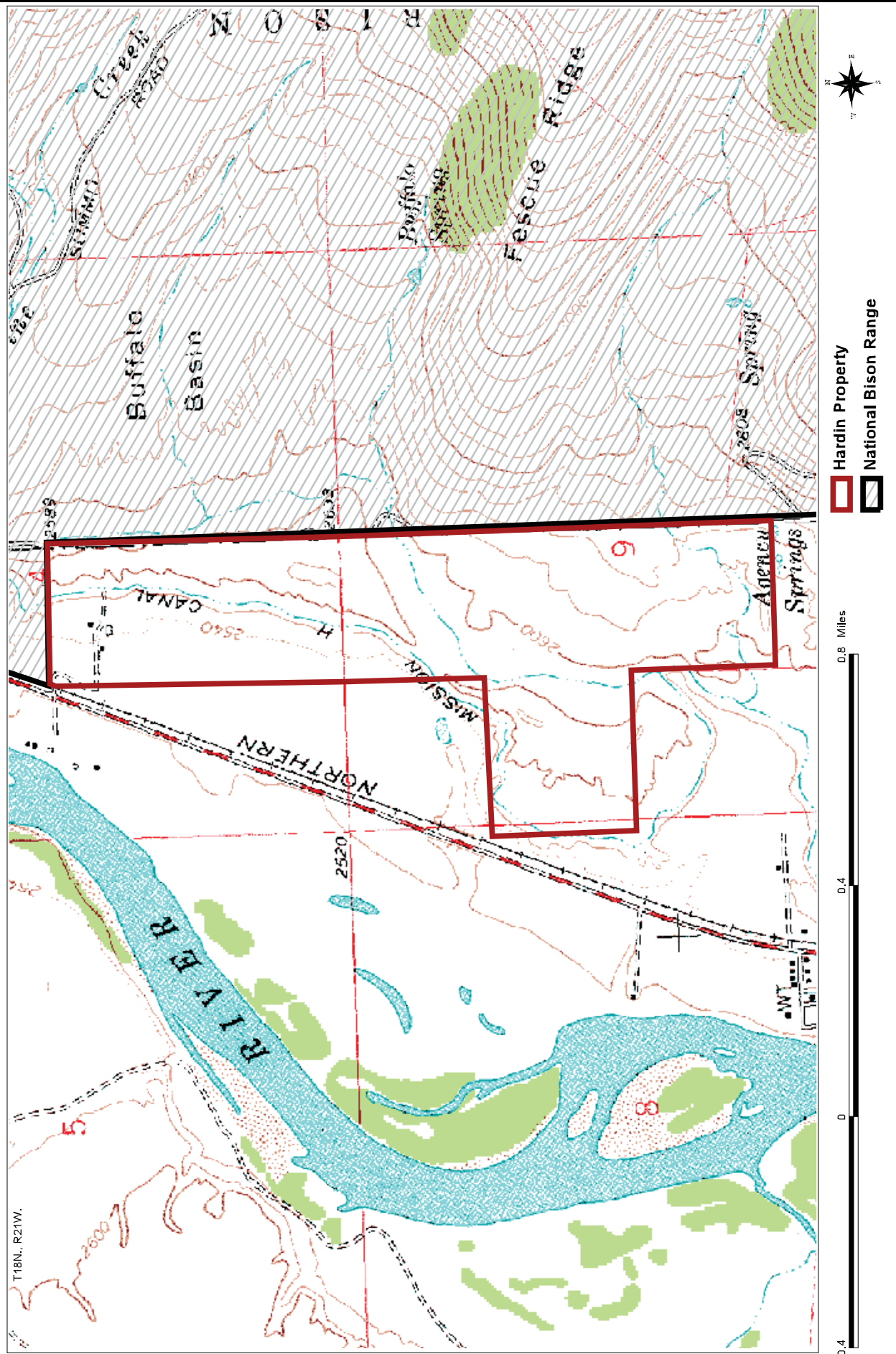


Figure 2. Proposed addition to the National Bison Range: the Hardin Property



Issues Identified and Selected for Analysis

Comments were solicited from the public for the proposed addition to the National Bison Range through a news release and a public meeting. A news release explaining the project and inviting the public to attend a public meeting was sent to the local newspapers. The public meeting was held at the National Bison Range the evening of March 8, 2001. In addition, personal invitations were extended to the Congressional delegation. Representatives of Senator Burns and Representative Rehberg attended the meeting. No one from the general public attended the meeting; however, some individuals provided comments at other times. Most people commenting on the project were supportive of the effort to acquire the Hardin Property. Some additional wildlife habitat and management issues were raised, such as:

Biological Issues

Wildlife Habitat Protection

The Hardin Property should be added to the National Bison Range to restore the land to native grasses and provide habitat for bison and native birds. This is the largest remaining tract of private fee owned land on the west side of the Refuge. Subdivision of this area would result in more people and their pets living near the Refuge, which could negatively impact the Refuge by increasing the incidence predation of native wildlife by domestic pets and human poaching.

This strip of land has significant weed problems in the form of spotted knapweed. Weed encroachment along this west boundary has been a significant problem to refuge managers for years. Prevailing winds carry knapweed seed onto the Refuge, causing deterioration of native grassland plant diversity and stand vigor.

Water Resources

If housing is developed on the Hardin Property, surface water, groundwater and drainage patterns could all be impacted. As more people move into the area and develop smaller tracts, water rights and water use patterns could be questioned and challenged regularly. Other landowners may be affected by water quantity and the quality available for use.

Social and Economic Issues

Landownership

Subdivision of agricultural land to housing development is increasing at an alarming rate in the area. Subdivision of this tract would potentially increase the value to the landowner; however, the community will lose open space and the aesthetic aspect of an open, less developed valley.

The Confederated Salish and Kootenai Tribes have expressed objections to the Service purchasing properties on the Flathead Reservation in the past. The Tribal council has indicated land acquisition by the Service reduces their opportunity to increase land base because they lose the chance to repurchase those lands.

Public Use

Conservation groups and local citizens expressed a desire to maintain open space for certain compatible uses, such as bison viewing, bird-watching, and photography. Groups also feel that the community economically benefits from eco-tourism, local recreation, hunting, and fishing. With the growing suburban area of the Mission Valley just north of this property, there is an expressed need to protect outdoor wildlife-related opportunity for the public.

Related Actions

The Confederated Salish and Kootenai Tribes (CS&KT) own tribal agriculture lands one mile south and one-half mile northwest of this property. They also own much of the Flathead River Corridor in this area of south Lake County and northeast Sanders County. They own the entire west shoreline of the River due west of this property. The property between the Hardin Property and Highway 212 is owned by an individual Tribal member. Just south of the Hardin Property and on the other side (west) of Highway 212 is the Dixon Agency land owned by Tribal government. This area is a Tribal member housing area with about 45 housing units. The above mentioned Tribal lands along with the lands of the National Bison Range leave the Hardin Property as an inholding or island surrounded by lands mostly protected from housing development. The possibility of housing development would not be consistent with the character of this part of the Reservation nor with the close proximity to the National Wildlife Refuge.

The Montana Cooperative Wildlife Research Unit (MCWRU) (United States Geological Survey) has collaborated with Federal, State, Tribal, and private land managers to conduct research on ground-nesting birds in the Mission Valley area since 1986. This research has provided much insight into the nesting needs of waterfowl, other migratory birds and grassland songbirds and the importance of this area to continental conservation efforts.

University of Montana, Yellow Bay Biological Sciences Lab and Virginia Common Wealth University has collaborated on studies of prairie rattlesnakes on the Bison Range and shown that radio equipped snakes have moved from the Bison Range to the Hardin Property and back.

The Craighead Wildlife-Wildlands Institute, Missoula, Montana has collaborated on studies of Rocky Mountain bighorn sheep on the Bison Range and shown that they can jump the Bison Range fence and leave the Refuge in the vicinity of the Hardin Property.

The Migratory Bird/Neotropical migrant office of the Mountain-Prairie Region USFWS, Denver, Colorado has collaborated on studies of grassland ground-nesting songbirds on the Bison Range near the Hardin Property, showing significant numbers of nesting grasshopper sparrows, vesper sparrows, chipping sparrows, and western meadowlarks.

The local community is very motivated to protect and improve their surrounding landscape. For example, the **Lower Flathead Valley Community Foundation** was established in 1994 with individuals from the local community and spearheaded efforts that restored four riparian corridors in the nearby Mission Valley. They have also been active in promoting conservation easements as a land planning tool, and they have collaborated with the CS&KT to reintroduce trumpeter swans to the Valley. Local agricultural communities are receptive to wetland and wildlife conservation practices including protection of grizzly bear habitat. In addition, wildlife represents a land-use priority to a substantial and growing number of private landowners. They express continued interest in assisting the Service and all partners in reaching habitat protection goals that will decrease the threat of subdivision and sub-urbanization of their community.

National Wildlife Refuge System and Authorities

The Service proposes to restore and protect lands within the Hardin Property by purchasing the tract. This will enhance the prospects of protecting the palouse prairie grasslands of the current national wildlife refuge (National Bison Range) from infestation by invasive weeds. The proposed refuge boundary expansion and resource protection actions would be consistent with the guiding principles for the management and general public use of the National Wildlife Refuge System (NWRS).

Guiding Principles of the National Wildlife Refuge System

1. **Habitat.** Fish and wildlife will not prosper without high-quality habitat, and without fish and wildlife, traditional uses of refuges cannot be sustained. The Refuge System will continue to conserve and enhance the quality and diversity of fish and wildlife habitat within refuges.
2. **Public Use.** The Refuge System provides important opportunities for compatible wildlife-dependent recreational activities involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation.
3. **Partnership.** America's sportsmen and women were the first partners who insisted on protecting valuable wildlife habitat within wildlife refuges. Conservation partnership with other Federal and State agencies, Tribes, organizations, industry, and the general public can make significant contributions to the growth and management of the Refuge System.
4. **Public Involvement.** The public should be given full and open opportunity to participate in decisions regarding acquisition and management of our national wildlife refuges.

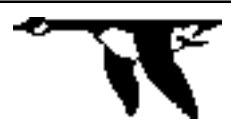
The Hardin Property would be administered as part of a National Wildlife Refuge (National Bison Range) and operated in accordance with the overall mission of the National Wildlife Refuge System. The broad goals of the NWRS describe the conservation of the nation's wildlife resources for the ultimate benefit of people.

The Goals of the National Wildlife Refuge System

1. To fulfill our statutory duty to achieve refuge purpose(s) and further the System mission.
2. Conserve, restore where appropriate, and enhance all species of fish, wildlife, and plants that are endangered or threatened with becoming endangered.
3. Perpetuate migratory bird, interjurisdictional fish, and marine mammal populations.
4. Conserve a diversity of fish, wildlife, and plants.
5. Conserve and restore, where appropriate, representative ecosystems of the United States, including the ecological processes characteristic of those ecosystems.
6. To foster understanding and instill appreciation of fish, wildlife, and plants, and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent public use. Such use includes hunting, fishing, wildlife observation and photography, and environmental education and interpretation.

The Mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

(National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57)



This goose, designed by J.N. "Ding" Darling, has become the symbol of the National Wildlife Refuge System.

Conservation of additional wildlife habitat through this acquisition would also continue to be consistent with the following legislation, policies, and management plans:

1. Legislation for the creation of a National Bison Range (Act of Congress 1908 and 1909 authorizing purchase of up to 20,000 acres).
2. Five Valleys Joint Venture Project (FVJVP 1992) wetland and ground-nesting bird habitat protection.
3. North American Waterfowl Management Plan (USFWS 1994) recovery of continental waterfowl populations.
4. Conservation of Avian Diversity in North America (USFWS 1990) recovery and protection of migratory song birds.
5. Grizzly Bear Recovery Plan (USFWS 1993) Mission Mountain grizzly population is nearby in the Mission Valley. Black Bears have been on this property and grizzlies have been noted within 3 air miles in the past 5 years.

The Habitat Protection and Land Acquisition Process

It is the established policy of the Service to acquire land or interests in land from willing sellers only. The authorities for the acquisition of the proposed property are the Fish and Wildlife Act of 1956 (16 U.S.C. 742 f (b) (1)), as amended. Acquisition funds would be made available through the Land and Water Conservation Fund Act of 1965. These Federal monies are derived primarily from oil and gas leases on the outer continental shelf, excess motorboat fuel tax revenues, and sale of surplus Federal property. The basic consideration in acquiring interest in land are: 1) biological significance of the land; 2) existing and anticipated threats to wildlife resources; and 3) landowners' willingness to sell or otherwise make property available for the proposed purchase. The purchase of a conservation easement is always considered prior to proposing fee-title acquisition.

Refuge Revenue Sharing Act

Under provisions of the Refuge Revenue Sharing Act (Public Law 95-469), the Service annually reimburses counties to offset revenue lost as a result of acquisition of private property. This Law states that the Secretary of the Interior (Secretary) shall pay to each county in which any area acquired in fee-title is situated, the greater of the following amounts:

1. An amount equal to the product of 75 cents multiplied by the total acreage of that portion of the fee area which is located within such county.
2. An amount equal to 3/4 of 1 percent of the fair market value, as determined by the Secretary, for that portion of the fee area which is located within such county.
3. An amount equal to 25 percent of the net receipts collected by the Secretary in connection with the operation and management of such fee area during such fiscal year. However, if a fee area is located in two or more counties, the amount for each county shall be apportioned in relationship to the acreage in that county.

The Refuge Revenue Sharing Act also requires that Service lands be reappraised every five years to ensure that payments to local governments remain equitable. Payments under this Act would be made only on lands that the Service acquires in fee-title.

Chapter 2. Alternatives, Including the Preferred Alternative

Chapter 2 describes two alternatives: a No Action alternative and an Action Alternative that identifies the Service's land acquisition program and provides Service authority to acquire the Hardin Property. Under the No Action alternative, the proposed land acquisition would not be completed; no addition of land would be made to the National Bison Range. The Action Alternative, which would be the preferred alternative, would include a new approved boundary for the National Bison Range that includes the Hardin Property. Potential impacts occurring by Federal ownership of the property and protection of habitat through land acquisition are evaluated.

If the preferred alternative is selected, current and future land acquired by the U.S. Fish and Wildlife Service are administered in accordance with the National Wildlife Refuge System Administration Act, Refuge Recreation Act, National Wildlife Refuge System Improvement Act and other relevant legislation, executive orders, regulations and policies. Management activities would include monitoring the status and recovery of endangered, threatened and sensitive species; controlling nonnative plant species; restoring native grassland habitats; developing and providing wildlife-dependent recreational, interpretive and education opportunities; and coordination with Tribal, County, State, and Federal government. Payments to Sanders County under the terms of the Refuge Revenue Sharing Act are applied to all lands acquired in fee-title. Public use would be authorized only when it is compatible with the mission of the National Wildlife Refuge System and Refuge purposes.

Alternative A. No Action

Under the No Action alternative, the Service's approved National Wildlife Refuge boundary for the National Bison Range would remain unchanged; the Service would not purchase the Hardin Property. There would be no Federal effort to protect this area from housing development and weed invasion, nor native grassland restoration effort. Existing wildlife habitat would be subject to protection through the land-use and regulatory controls administered by Sanders County, The Confederated Salish and Kootenai Tribes, the State of Montana or other Federal agencies.

Alternative B. Acquisition of the Hardin Property as an Addition to the National Bison Range

Under Alternative B, the Service would establish a new boundary for the National Bison Range. The new boundary would include the 240-acre Hardin Property on the west side of the Refuge. Fee-title acquisition would be the preferred protection method. The Service would identify existing wildlife-dependent recreation activities on lands proposed for acquisition, and determine which would be allowed to continue on acquired lands on an interim basis until Refuge management planning is completed.

Alternative Considered but not Studied

Purchasing a conservation easement from the Hardin Family was considered but not studied. The Hardin Family was not interested in a conservation easement on the entire property. The Hardin Family will sell the property in subdivided parcels if the Service does not purchase the entire tract in fee-title.

Chapter 3. Affected Environment

The proposed Hardin Property acquisition is adjacent to the western boundary of the National Bison Range in Sanders County, a mountainous region located in northwestern Montana. The County consists of a broad depression between mountain ranges within the Rocky Mountain Range. The Cabinet Mountains to the west reach altitudes over 7,000 feet and those of the Swan Range in the east between 8,000 and 9,000 feet. The Mission Valley to the north is home to the Flathead Lake and wetland potholes. The portion of the Flathead Valley, in which the Bison Range is located, has a microclimate usually characterized by relatively mild winter temperatures and little wind.

Biological Environment

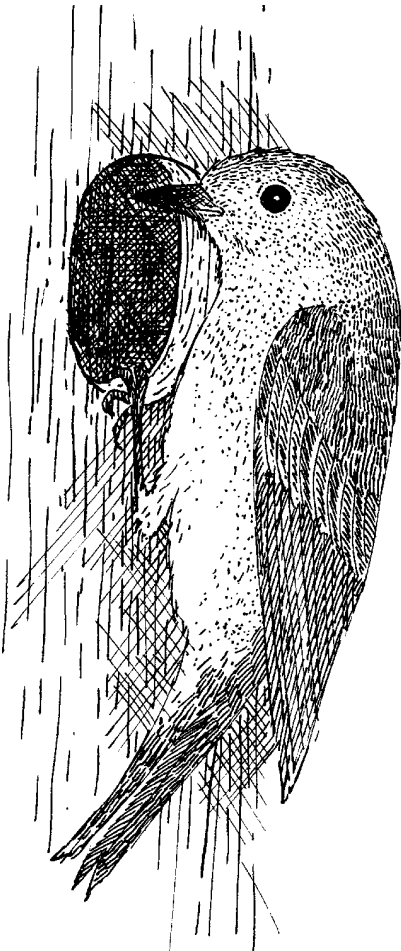
The Hardin Property is approximately one-half dry grassland pasture (120 acres) and one-half irrigated alfalfa (120 acres). Although some of the property is native palouse prairie, most of the grassland on the property is planted pasture grasses. The Hardin Property shares 1½ miles of common boundary with the Bison Range and has potential habitat for many of the terrestrial species that inhabit the Refuge.

Bison are the primary management emphasis on the Refuge. Approximately 380 bison are on the Refuge in October, after the annual removal of surplus animals. Since Refuge establishment, other big game animals have been introduced to the area, and secondary management emphasis is directed toward species diversity. Other big game animals inhabiting the area include approximately 150 Rocky Mountain elk, 50 bighorn sheep, 225 mule deer, 175 white-tailed deer, 130 pronghorn, 20 mountain goats, 8 to 10 mountain lions, and 6 to 8 black bears.

The Bison Range is inherently diverse with a wide variety of habitats supporting numerous wildlife species other than big game. These include badgers, bobcats, marmots, ground squirrels, painted turtles, tree frogs, rattlesnakes, waterfowl, and numerous Neotropical migratory birds. Mountain and western bluebirds are abundant and have benefitted from the maintenance of 60 bluebird houses. Some of these bird houses are attached to the boundary fence between the Hardin Property and the Bison Range. Wildlife on the Hardin Property noted in the past two years include a black bear, elk, mule deer, white-tailed deer, long billed curlew, badgers, prairie rattlesnakes, king snakes, western kingbirds, mountain lion, gray wolf, Columbian ground squirrel, painted turtle, and bluebirds.

Several threatened and endangered species utilize the Bison Range and adjacent habitat. For example, occasional grizzly bears enter, despite the tall exterior boundary fence and bull trout may occur in those tributaries of the Flathead River that drain the Bison Range (Mission creek or the Jocko River). Gray wolves have been noted just outside the Bison Range boundary fence on several occasions in the last decade. Bald eagles are year-round visitors and number up to 10 at times. Peregrine falcons are noted during the late fall and winter and nest 9 miles north of the Refuge and 20 miles west of the Refuge. The Bison Range is also a historic nesting area of the Columbian sharp-tailed grouse, a U.S. Forest Service listed "sensitive species."

During the late fall and early winter, when most lake and pond water in western Montana is frozen and the Flathead River is still open to hunting, waterfowl are very abundant on the Refuge. At this time of year as many as 30,000 ducks and 3,000 geese may use the Bison Range each day as refuge from hunters. These birds fly to grain fields off-Refuge to feed at night and rest on Mission Creek during the day. In some years, the mid-winter aerial waterfowl count will find over 50 percent of all waterfowl in Montana near Moiese and the National Bison Range.



Bluebird © Cindie Brunner

The diverse habitats on the Bison Range support a variety of bird species. Specific point count surveys of the Refuge in recent years have noted 111 species of birds during the nesting season, and over 200 species have been recorded over the life of the Refuge. Neotropical migratory birds include grassland species such as grasshopper and vesper sparrows to timber and riparian associated species like the Townsend's solitaire, Lewis' woodpecker and yellow-breasted chat. Other species of special interest include long-billed curlews, Virginia rails, soras, Wilson's phalaropes and nesting golden eagles. Common raptors include northern harriers, red-tailed hawks, short-eared owls, great horned owls, and long-eared owls. Upland game bird species known to inhabit the area include ring-necked pheasants, gray partridges, blue grouse, and ruffed grouse.

Social and Economic Considerations

There are three communities near the study area and all have populations less than 200 - Dixon, Moiese, and Agency. All are unincorporated communities of tribal and non-tribal members on the Flathead Indian Reservation. Many of the people in this area are retired, employed by the local schools or tribal government or are farmers and ranchers. Vendors in Charlo and Moiese have benefitted from a high seasonal influx of tourists, bird-watchers, anglers, and visitors to the National Bison Range. The Bison Range alone has over 200,000 visitors per year.

Agricultural Resources

Land-use on the Hardin Property is about 2/3 grazing land and 1/3 hay land. Approximately 120 acres of the 240 are irrigated from the Mission H canal. The dry land portions of the property are in pasture grass and exotic plants such as spotted knapweed, sulphur cinquefoil, and Dalmatian toadflax. The landowner currently leases the property for cattle grazing. The property can support approximately 240 animal units per month (AUMS). Agriculture practices on this property are less intensive than in other parts of the Mission Valley where potatoes or grain are cultivated. Economics of this property prohibit the current landowner from investing the funds needed to keep exotic plants under control.

Mineral Resources

Gravel deposits exist under the Hardin Property; however, according to appraisals of the property, the mineral rights associated with these deposits are not of significant value. There is an existing gravel pit, of about 10 acres, on the property adjacent to the western side of the Hardin Property. This gravel pit is used on a sporadic basis. The soil map shows that on the Hardin Property there are about two acres of the same type of gravelly soils associated with the neighboring gravel pit. The mineral rights to extract gravel from under the proposed acquisition are detached from the property on 200 acres of the 240 acres. Currently, 24 people own the gravel rights on this property.

Public Use and Wildlife-Dependent Recreation Activities

Lands identified in the study area are privately owned by the Hardin Family Trust. No public hunting occurs on the property without the landowner's permission. No fish resources exist on the property. The property is used by the Mission Valley Saddle Club as their camp site the two nights prior to a horseback steak ride on the National Bison Range. This is an annual event allowed by USFWS special use permit.

Cultural Resources

The U.S. Fish and Wildlife Service, as a Federal agency, has trust responsibility to the Tribes not to diminish the sovereignty of the Tribal government nor their culture or their trust resources. Acquisition of this property does not compromise Tribal jurisdiction or Tribal rights because it deals with a willing seller of private land.

If the Service purchases the property, archaeological and historical resources within the proposed project area would receive protection under Federal laws mandating the management of cultural resources. These laws include, but are not limited to:

- Archaeological Resources Protection Act
- Archaeological and Historic Preservation Act
- Native American Graves Protection and Repatriation Act
- National Historic Preservation Act

Currently, the Service does not propose any project, activity, or program that would result in changes in the character of, or would potentially adversely affect, any historic cultural resource or archaeological site. When such undertakings are considered, the Service would take all necessary steps to comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The Service would also pursue pro-active compliance with Section 110 of the NHPA to survey, inventory, and evaluate cultural resources.

The Confederated Salish and Kootenai Tribal Government believe the non-Indian population, within the Reservation, has a significant impact on their culture and heritage, and they are opposed to additional development that would impact their traditional ways of life. They are involved in an active land purchase program within the Reservation that returns privately owned land to the Tribe. Once a tract has been purchased by the Service, the Tribes feel they are no longer able to make use of that land. The Service does have legislative and policy processes by which the Tribes could possibly trade a specific tract with the Service if Service goals can be met or enhanced by trading.

Contaminants and Hazardous Wastes

The area identified for proposed acquisition is not listed in the current U.S. Environmental Protection Agency, Region 8, State of Montana, National Priorities List Sites (NPL) August 11, 1997. The NPL identifies hazardous waste sites requiring cleanup action under Superfund Law.

Fieldwork for the pre-acquisition contaminant survey will be conducted prior to the purchase of land. A preliminary survey has already been conducted on the Hardin Property to determine if contaminants pose a threat to fish and wildlife or a liability to the Service. That survey found old railroad ties that will need to be removed. They are currently stacked on clay soil, resistant to permeation. The property was the site of a methamphetamine lab during the 1990s. The lab was contained in a mobile trailer that was removed by U.S. Marshals and the Sanders County Sheriff's Office in 1999. Service policies and guidelines related to contaminants on proposed acquisition properties will be followed.

Chapter 4. Environmental Consequences

Effects on the Biological Environment

This Chapter assesses the environmental impacts expected to occur from the implementation of either Alternative A or B, as described in Chapter 2. Environmental impacts are analyzed by issues for each alternative and appear in the same order as discussed in Chapter 1.

Biological Issues

Wildlife Resource Protection

Alternative A (No Action) - If the Service does not purchase the Hardin Property, the property will likely be developed for housing. The current owners (Hardin Property) have contracted a surveyor to develop a subdivision proposal for the Sanders County Commission's consideration. The construction of new homes will result in the direct disruption of wildlife habitat in the immediate area of the housing units. Residential development can also impact biodiversity in nearby, undisturbed areas. At least one study found that residential development reduced bird species diversity and abundance by as much as one-third to one-half in adjacent undisturbed woodlands (Friesen *et. al.* 1995). Although this proposal involves grassland habitat and bird species, it is not unreasonable to expect a similar effect on biodiversity and abundance on the Hardin Property, and adjacent areas of the Bison Range, if the property is developed.

The influx of people subsequent to the housing development will increase the potential for human trespass and poaching. The new roads associated with a development would allow poachers to bring vehicles close to the Refuge and gain access without having to use the main entrance road. The ability to access the Refuge away from the main entrance makes detection of trespass and poaching more difficult.

Domestic pets are often associated with housing development, which may result in increased predation pressure on native wildlife. Cats from rural settings, such as the Hardin Property if developed, tend to kill more wild animals than more urbanized cats. Small mammals are the most common prey species, with birds comprising approximately 20 percent of the diet. Documented numbers of prey items taken by a cat in a year vary tremendously, from none to over 365 (Fitzgerald and Turner 2000). This makes estimating the impact of cat predation on wildlife extremely difficult; however, at least one study estimates an average, intermediate predation rate of 91 animals per year per cat (Coleman and Temple 1996). Bird species taken by cats tend to be ground-nesters and feeders (Fitzgerald and Turner 2000), which may make the bird species on the adjacent Bison Range particularly vulnerable, as many grassland birds nest and feed low to the ground. Cats have had a significant, negative effect on native wildlife on islands where species did not evolve with mammalian predators; however, in the continental United States, a significant effect on native wildlife populations by cat predation has not been demonstrated.

Alternative B (Preferred Alternative) - If the Service purchases the Hardin Property, it will not be converted for housing development. In contrast, the Service would take action to restore and enhance the existing wildlife habitat.

This Alternative improves the quality and increases the availability of habitat on the National Bison Range and allows for greater management flexibility. The establishment of this property as part of the Refuge, and subsequent habitat restoration, would increase habitat and grazing potential for the bison herd and other wildlife. The Refuge staff currently estimates that the Bison Range provides 5,880 AUMs for all wildlife, and bison utilize approximately 3,960 AUMs. The acquisition of the Hardin Property would provide another 240 AUMs, which would be a 4 percent increase in available forage. However, the Refuge would likely use about half of the grazing potential of the property in accordance with their current deferred rotation method for bison grazing management.

The habitat on the property has the potential to support almost any of the 200+ migratory and resident bird species that use the National Bison Range Complex. In other words, the number of avian species that will benefit is potentially the entire suite of birds that use the Mission Valley.

If the Service acquires this property, restoration of the weedy, nonnative pasture and alfalfa to native grasses will be initiated. This will help the efforts of the Bison Range staff to control weed problems, particularly spotted knapweed and Dalmation toadflax, along the western boundary. This property is easier to access than the steep slopes of the Bison Range, which will make it possible to use tractor driven equipment to treat weed infestations.

Several of the potential negative impacts of housing development adjacent to the Bison Range will be avoided. For example, an influx of domestic pets that may be expected with the addition of single family homes would not occur. Domestic pets commonly prey on native wildlife species (Fitzgerald and Turner 2000, Coleman and Temple 1996). In addition, the potential for human trespass and wildlife poaching will not increase if new residents are not attracted to the area by housing.

Water Resources

Alternative A (No Action) - Under the No Action Alternative, the property will likely be subdivided, which could impact the water resources in the area. The Environmental Protection Agency (EPA) provides an analysis of water quality in all of the watersheds in the United States (<http://www.epa.gov>). The Lower Flathead watershed, in which the project is located, is considered by the EPA to have 'less serious water quality problems' with 'low vulnerability to stressors such as pollutants.' An increase in the human population in the watershed, to which a development project on the Hardin Property would likely contribute, is considered a potentially serious pressure by the EPA.

Residential development will change water use in the project area. Possible changes include groundwater pollution from septic systems, loss of natural filtering by grassland plant communities, water rights disputes, water diversion, artificial ponds and introduction of nonnative fish and plants (Pringle 2000). However, at the watershed level, the Lower Flathead is rated by the EPA in the lowest risk category for the potential impact of land development on aquatic ecosystems.

Alternative B (Preferred Alternative) - The EPA considers the surrounding watershed to have 'less serious problems and low vulnerability' relative to other watersheds in the United States. The water quality and resources associated with the Hardin Property will be maintained, and likely improved, if the Service purchases the property. By purchasing and protecting the Hardin Property, the Service would ensure that water resources would be protected from increased nonpoint pollution due to subdivision and development.

Effects on the Social and Economic Issues

Landownership

Alternative A (No Action) - Under this Alternative, subdivision of the agricultural land into 5 to 20 acre housing units is projected on the Hardin Property. Cattle grazing and other agricultural activities would be phased out as land is developed for homes. The subdivision of this tract would potentially increase the value to the landowner; however, the community will lose open space and the aesthetic benefits of an open, less developed Valley. Furthermore, economic studies in Montana have found that residential land demands significantly more money from the County in direct services, such as education and public works, than it contributes in tax revenue (Haggerty 1997).

Development and growth in the Mission Valley, and Lake County in particular, are significantly increasing. The development of rural lands in the Valley has increased from an average rate of 100-500 acres per year from 1982 to 1992 to an average of 500-1,000 acres per year from 1992 to 1997 (Natural Resource Inventory 1997). Similarly, the population of Lake County has increased by 26 percent since 1990, and Sanders County has grown by 18 percent (U.S. Census Bureau 2000).

Alternative B (Preferred Alternative) - The Service considers open space and the rural nature of the Mission Valley important for maintaining the integrity of wildlife habitat. If the Service purchases the property, the current cattle grazing lease would be phased out and the grasslands used as grazing habitat for bison and other wildlife. In addition, land values may increase in the future if wildlands can be protected. Areas such as the Bison Range, and the surrounding undisturbed Flathead River and Mission Mountains, will be rare commodities which will help private land values appreciate in the future.

Preventing subdivision and development would affect the tax base. The taxes paid on the Hardin Property in 1999 were \$3,798. The Service's payment-in-lieu-of-taxes policy is to pay the County 3/4 of 1 percent of the appraised value of the land (see Chapter 1), which would amount to \$2,190 to the County annually. However, in 2000, the Refuge Revenue Sharing program was not fully funded by Congress, and actual payment to the County was 58 percent of the amount due. This would translate to a payment of \$1,270 by the Service. The funding for the Refuge Revenue Sharing program varies each year, with full funding a constant goal. Although the taxes paid to the County may decrease, keeping the property as open space under Service ownership could be a net saver of tax dollars to the County. Studies in Montana and nationally show that "... open space provides local governments with a surplus of revenue from property taxes and other revenue sources while residential development drains local government coffers" (Haggerty 1996). Open space is ultimately less expensive to the County because the County does not need to provide services such as road maintenance, utilities, education, etc., as they would with a housing development.

Public Use

Alternative A (No Action) - No public use of the property occurs without special permission from the landowner. If the Service does not purchase the Hardin Property, and subsequently it is developed into housing, any current opportunities for wildlife-dependent public use, such as bird-watching, wildlife viewing and photography which occur from Highway 212 along the western boundary of the property, will be lost. In addition, once the habitat has been altered for housing development, any additional public uses that might be permitted in the future would no longer be possible.

Alternative B (Preferred Alternative) - If the Service purchases the property, the Hardin Property would be closed to public uses such as hunting, fishing, wildlife viewing, photography, environmental education, and interpretation. However, wildlife viewing and photography would still be possible from Highway 212 along the western side of the property. Opportunities to view bison and other wildlife from Highway 212 may increase because the Bison Range fence would be moved to the western edge of the Hardin Property, which is closer to the road. Furthermore, restoration of the habitat on the property will likely attract additional wildlife.

This determination has been made to serve in the interim until the management and public use of the Bison Range undergoes public review (see Chapter 6). The National Bison Range currently is scheduled to begin the process of developing a Comprehensive Conservation Plan (CCP), which will involve the public, in 2003. If the Hardin Property is purchased by the Service, this property would be part of the CCP process for the National Bison Range.

Unavoidable Adverse Impacts

Adverse impacts may occur with the selection of the Preferred Alternative. If the Service purchases the Hardin Property, Sanders County may receive less revenue from taxes on the property in some years. However, this may be offset by savings to the county from reduced maintenance costs on Refuge land instead of residential properties (Haggerty 1996).

It is possible, that even if the Service buys the property, the mineral rights will be sold and gravel could be extracted from the property. However, this adverse impact is unlikely for several reasons. This is a relatively remote part of the Flathead Indian Reservation and gravel resources are not expected to be in high demand in the foreseeable future. Highway 212 was reconstructed in 1989, and Highway 200 (3 miles away) began reconstruction in 1999 and is finishing now, in 2001. Sufficient gravel remains in the existing gravel pit, on the neighboring property, to meet all needs short of a major highway reconstruction project. Currently, such a project is not anticipated by any government.

The gravel on the Hardin Property would also be difficult to access, in part because of negotiation difficulties. The Service would acquire full gravel rights on 40 acres and 1/8 of the rights on the other 200 acres. The remaining gravel rights on the property are owned by 24 different owners. With so many owners of the gravel rights on the property, it is likely that contractors would prefer a property and gravel that is more easily price negotiated.

In addition, the gravel would be physically difficult to extract. The only direct access to the property from Highway 212 would be in the northwest corner, which would require trucks to travel over soft, boggy ground to the potential extraction site. The most direct access from Highway 212, across the adjacent landowner's property, is an unlikely route because the gravel pit on this property currently exceeds demand. The landowner is not likely to grant permission to access a new gravel site when gravel remains in their existing pit.

If the gravel is mined, laws requiring reclamation of the site will be followed. Gravel mining is considered a less serious threat to the integrity of the National Bison Range than housing development.

Irreversible and Irretrievable Commitment of Resources

If the Service does not purchase the property, no immediate commitment of resources would be required. However, if housing is developed on the property, the Refuge may need to direct more resources for law enforcement and weed control to portions of the Refuge adjacent to the property.

Completing the planning for the acquisition of the Hardin Property does not involve a significant commitment of resources. However, if the Service does purchase the property, funds will be required for the acquisition. In addition, the habitat restoration planned for the property will require additional personnel time and Refuge funds.

Short-term Uses Versus Long-term Productivity

If the Service does not purchase the Hardin Property and it is converted to housing, there will be short-term monetary gains to the owner of the property and the County via increased property taxes. In the long-term, however, the County may expend more money to provide services to the residential development than it receives in taxes from the properties. Also, there will be a long-term negative impact to the wildlife resources on the property and those on the adjacent Bison Range.

If the Service does purchase the Hardin Property, the long-term productivity of the land for wildlife habitat will be enhanced. Other housing developments that may eventually move into the area will likely have an increased value due to the open space associated with the expanded Bison Range. Also, residents of the area will benefit from the long-term protection of at least a portion of the open nature of the valley.

Cumulative Impacts

If the Service does not purchase the property and housing is developed, it will likely add to the significant growth in population projected for Sanders and Lake Counties over the next 25 years. The U.S. Census Bureau predicts that Lake County's population will grow by 48 percent and Sanders County will grow by 66 percent by 2025.

The Hardin Property would increase the size of the Bison Range from 18,566 acres to 18,806 acres. This is still within the limit of 20,400 acres that has already been set by Congress. The 240-acre property will also contribute to the overall benefit to bison, wildlife, and people currently provided by the National Bison Range.

Chapter 5. Coordination and Environmental Review

Agency Coordination

The proposal for the addition to the National Bison Range, through the authorization of an executive boundary to protect an additional 240 acres, has been discussed with landowners, conservation organizations, Federal, Tribal, State and county governments, and other interested groups and individuals.

This Environmental Assessment addresses the protection of upland resources, primarily through fee-title acquisition, by the Service under the direction of the National Wildlife Refuge System.

Funding for the fee-title acquisition will be provided by the Land and Water Conservation Fund. Management activities associated with the acquisition could be funded through other sources, such as the North American Wetlands Conservation Act grants, Ducks Unlimited, and Partners for Fish and Wildlife.

National Environmental Policy Act

As a Federal agency, the U.S. Fish and Wildlife Service must comply with provisions of the National Environmental Policy Act (NEPA). An Environmental Assessment is required under NEPA to evaluate reasonable alternatives that will meet stated objectives and to assess the possible impacts to the human environment. The Environmental Assessment serves as the basis for determining whether implementation of the proposed action would constitute a major Federal action significantly affecting the quality of the human environment. The Environmental Assessment also facilitates the involvement of government agencies and the public in the decision-making process.

Other Federal Laws, Regulations and Executive Orders

In undertaking the proposed action, the Service would comply with a number of Federal laws, Executive Orders and legislative acts, including:

- Floodplain Management (Executive Order 11988)
- Intergovernmental Review of Federal Programs (Executive Order 12372)
- Protection of Historical, Archaeological and Scientific Properties (Executive Order 11593)
- Protection of Wetlands (Executive Order 11990)
- Management and General Public Use of the National Wildlife Refuge System (Executive Order 12996)
- Endangered Species Act of 1973, as amended
- Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended
- Refuge Recreation Act, as amended
- Refuge System Administration Act, as amended
- National Historic Preservation Act of 1966, as amended.

Distribution and Availability

Copies of the Environmental Assessment were sent to Federal and State legislative delegations, agencies, landowners, private groups and other interested individuals (see Appendix B). Additional copies of these documents are available at the U.S. Fish and Wildlife Service, National Bison Range, 132 Bison Range Road, Moiese, Montana 59824, and at the U.S. Fish and Wildlife Service, Division of Planning, P.O. Box 25486-DFC, Denver, Colorado 80225, phone 303-236-8145 ext. 658; fax 303-236-4792.

Authors

Bill West, Supervisory Refuge Operation Specialist, National Bison Range, Moiese, MT

Vanessa Hill, Fish and Wildlife Biologist, Environmental Compliance and Planning Branch, Division of Planning, National Wildlife Refuge System, Lakewood, CO

John Esperance, Fish and Wildlife Biologist, Environmental Compliance and Planning Branch, Division of Planning, National Wildlife Refuge System, Lakewood, CO

References

- Coleman, J.S. and S.A. Temple. 1996. On the prowl. Wisconsin Nat. Res. Dec. <http://www.wnrmag.com/stories/1996/dec96/cats.htm>
- Fitzgerald, B.M. and D.C. Turner. 2000. Hunting behaviour of domestic cats and their impact on prey populations. In Turner, D.C. and P. Bateson (eds), *The Domestic Cat: the Biology of its Behaviour*. Cambridge Univ Press, 244pp.
- Friesen, L.E., Eagles, P.F., and R.J. Mackay. 1995. Effects of residential development on forest-dwelling neotropical migrant songbirds. *Conserv Biol* 9(6):1408-1414.
- Haggerty, M. 1996. Costs of County and Educational Services in Gallatin County, Montana. Published by Local Government Center, Montana State University, Bozeman, Montana 9pp.
- Haggerty, M. 1997. Fiscal impacts of alternative development patterns: Broadwater and Gallatin Counties. Published by Local Government Center, Montana State University, Bozeman, Montana 10pp.
- Natural Resources Inventory. 1997. Annual rate of development. U.S. Department of Agriculture, map id#5095. <http://www.nhq.nrcs.usda.gov>
- Pringle, C. 2000. Threat to U.S. public lands from cumulative hydrologic alternation outside of their boundaries. *Ecol Appl.* 10(4): 971-989.
- U.S. Census Bureau. 2000. Population Change and Distribution. Montana data by county. <http://www.census.gov>

Chapter 6. Interim Compatibility Determination

Refuges are Primary-Use Areas

Units of the National Wildlife Refuge System are managed as primary-use areas; that is, primarily for the benefit of fish, wildlife, and their habitats. In addition, refuges are closed to other uses unless specifically and formally opened (National Wildlife Refuge System Administration Act of 1966 [NWRAA of 1966, 16 U.S.C. 668dd]). This contrasts with units of other Federal land management systems managed under a multiple-use mandate (i.e., national forests administered by the U.S. Forest Service and public lands administered by the U.S. Bureau of Land Management).

The Compatibility Standard

Before activities or uses can be allowed on a national wildlife refuge, Federal law requires that they be formally determined to be “. . . compatible with the major purposes for which such areas were established . . .” (NWRAA of 1966). A compatible use is “an allowed use that will not materially interfere with or detract from the purposes for which the unit was established” (Fish and Wildlife Service Manual, 602 FW1.4A).

For recreational uses to be allowed, it must be determined that the uses are “. . . practicable . . .,” that they “. . . will not interfere with the primary purposes for which the areas were established . . .,” and that “. . . funds are available for the development, operation, and maintenance of these permitted forms of recreation . . .” (Refuge Recreation Act of 1962 [10 U.S.C. 460k]).

Interim Compatibility Determination

The Service is required by Executive Order 12996 of March 25, 1996, to identify, prior to acquisition of new refuges or refuge additions, existing owner-authorized, wildlife-dependent recreational activities that would be allowed following Service acquisition. Wildlife-dependent recreational activities within the Hardin Property proposed addition are identified in Table 1.

The proposed Hardin Property addition is currently in private ownership and public access is not allowed; however, public viewing and photography is accessible from the public road on the west side of the proposed addition.

Table 1. Interim Compatibility Determination Matrix				
Wildlife-dependent Recreation Activity	Existing Activity	Funds and Staff Available to Manage	Compatible for Interim Period	Interim Use Allowed?
Wildlife Observation	No	No	No	No
Environmental Interpretation	No	No	No	No
Wildlife Photography	No	No	No	No
Environmental Education	No	No	No	No
Hunting	No	No	No	No
Fishing	No	No	No	No

Appendix A. Endangered, Threatened and Candidate Species

Gray wolf	<i>Canis lupis</i>	Endangered
Grizzly bear	<i>Ursus arctos horribilis</i>	Threatened
Canada lynx	<i>Lynx canadensis</i>	Threatened
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened
Spalding's campion	<i>Silene spaldingii</i>	Proposed Threatened

These species have been reported in the vicinity or area surrounding the project area, not necessarily resident on the Hardin Property.

Appendix B. Distribution List for the Environmental Assessment

Federal Government

U.S. Fish and Wildlife Service, Division of Refuges, Region 6
U.S. Fish and Wildlife Service, Realty Office, Benton Lake, MT
Bureau of Indian Affairs, Flathead Irrigation Project

Tribal Government

Confederated Salish and Kootenai Tribes

Congressional Members

Senator Max Baucus
Senator Conrad Burns
Representative Dennis Rehberg

State Government and Offices

Senator Mike Taylor
Representative Joey Jayne
Montana State Clearinghouse
Montana Department of Fish, Wildlife and Parks
Montana Natural Heritage Program

Local Government

Sanders County Commissioners
Sanders County Planning Office
Sanders County Weed Office
Sanders County Sheriff

Private Groups and Individuals

Joint Board of Control for the Flathead Irrigation District
Conservation Fund
Individuals

National Bison Range
132 Bison Range Road
Moiese, Montana 59824
406/644 2211
fw6_rw_nat'l_bison_range_nwr@fws.gov

U. S. Fish & Wildlife Service
<http://www.fws.gov>
<http://www.r6.fws.gov/larp>

For Refuge Information
1 800/344 WILD

November 2001

